

Appl. No. 10/708,783
Amdt. dated July 25, 2005
Reply to Office action of April 18, 2005

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

5 Claim 1-7 (Canceled).

 Claim 8 (New): A method for monitoring a machine comprising:
 selecting a product wafer running through a machine;
 performing a non-destructive detection to inspect a plurality of
10 defects;
 separating pre-layer defects from layer defects;
 analyzing the top layer defects for killer defects;
 if killer defects are present among the top layer defects, initiating an
 alarm on the machine; and
15 if killer defects are not present among the top layer defects,
 processing a work of the machine.

 Claim 9 (New): The method of claim 8 wherein the step of separating
 the pre-layer defects is performed according to a predetermined
20 database, the database comprising a classifying rule of each defect
 type and defect information of each defect type.

 Claim 10 (New): The method of claim 9 wherein the defect
 information of each defect type comprises an influence degree over a
25 yield of the semiconductor process of each defect type.

 Claim 11 (New): The method of claim 10 wherein when killer defects
 are detected, the method further comprises following steps:

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performing a root cause analysis according to the defect type of the
detected defects; and
informing a responsible person of the semiconductor process to
correct process parameters of the semiconductor process.

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Claim 12 (New): The method of claim 8 wherein the method utilizes
inline automatic defect classification (ADC) tools to classify the
defects.

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Claim 13 (New): The method of claim 12 wherein the ADC tools
includes databases of defect types of each layer to classify the
defects.

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